

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference B14435.3 LP	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/FR2004/050476	International filing date (day/month/year) 01.10.2004	Priority date (day/month/year) 03.10.2003
International Patent Classification (IPC) or national classification and IPC H01C1/16		
Applicant COMMISSARIAT A L'ENERGIE ATOMIQUE		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2), with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FR2004/050476

Box No. I	Basis of the report
1.	<p>With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p><input type="checkbox"/> This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:</p> <p><input type="checkbox"/> international search (Rule 12.3 and 23.1(b))</p> <p><input type="checkbox"/> publication of the international application (Rule 12.4)</p> <p><input type="checkbox"/> international preliminary examination (Rule 55.2 and/or 55.3)</p> <p>2. With regard to the elements of the international application, this report is based on <i>(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)</i>:</p> <p><input type="checkbox"/> the international application as originally filed/furnished</p> <p><input checked="" type="checkbox"/> the description:</p> <p>pages <u>1-13</u> _____ as originally filed/furnished</p> <p>pages* _____ received by this Authority on _____</p> <p>pages* _____ received by this Authority on _____</p> <p><input checked="" type="checkbox"/> the claims:</p> <p>nos. _____ as originally filed/furnished</p> <p>nos.* _____ as amended (together with any statement) under Article 19</p> <p>nos.* <u>1-21</u> _____ received by this Authority on <u>05.07.2005 with letter</u></p> <p>nos.* _____ received by this Authority on <u>of 16.06.2005</u></p> <p><input checked="" type="checkbox"/> the drawings:</p> <p>sheets <u>1/2, 2/2</u> _____ as originally filed/furnished</p> <p>sheets* _____ received by this Authority on _____</p> <p>sheets* _____ received by this Authority on _____</p> <p><input type="checkbox"/> a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.</p> <p>3. <input type="checkbox"/> The amendments have resulted in the cancellation of:</p> <p><input type="checkbox"/> the description, pages _____</p> <p><input type="checkbox"/> the claims, nos. _____</p> <p><input type="checkbox"/> the drawings, sheets/figs _____</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>): _____</p> <p><input type="checkbox"/> any table(s) related to sequence listing (<i>specify</i>): _____</p> <p>4. <input type="checkbox"/> This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).</p> <p><input type="checkbox"/> the description, pages _____</p> <p><input type="checkbox"/> the claims, nos. _____</p> <p><input type="checkbox"/> the drawings, sheets/figs _____</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>): _____</p> <p><input type="checkbox"/> any table(s) related to sequence listing (<i>specify</i>): _____</p> <p>* If item 4 applies, some or all of those sheets may be marked "superseded."</p>

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FR2004/050476

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-21</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-21</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-21</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

1. Reference is made to the following documents:

D1: EP-A-0 813 088;

D2: EP-A-1 188 840.

1.1 Document D1 describes (cf. the abstract) an optical relay that is activated by means of thermal stimulation. Said relay (cf. column 4, lines 15-17 and 52-59) consists of an array of individually addressable resistors (microheaters) that have a negative temperature coefficient (cf. column 12, lines 5-11, TaAl-based resistor) and thermally stimulate a relay constituting a thermally activatable component.

Document D2 describes (cf. the abstract and paragraphs 16, 17, 44 and 45) an assembly of selectively activated heating elements that are arranged on a substrate and enable selective chemical reactions. Each heating element can be associated with a temperature probe.

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
1.2	<p>It follows that the subject matter of claim 1 differs from documents D1 and D2 in that it includes means for adjusting the duration of control voltage application across the terminals of at least one of the resistors.</p>
1.3	<p>As a result, the subject matter of claim 1 is novel (PCT Article 33(2)).</p>
1.4	<p>The problem that the present invention is intended to solve can therefore be considered to be that of optimising the efficiency of each resistor addressed.</p> <p>The solution to this problem, as proposed in claim 1 of the present application, is considered to involve an inventive step (PCT Article 33(3)), for the following reasons:</p> <p>There is no indication in the prior art that would prompt a person skilled in the art to adjust the duration of voltage application across the terminals of the resistor in order to increase the efficiency thereof.</p>
1.5	<p>Claims 2-13 are dependent on claim 1 and, as such, therefore also fulfil the PCT requirements of novelty and inventive step.</p>
2.	<p>For the same reasons as those set out in paragraphs 1.2 to 1.4 above, the production method as per independent claim 14 and dependent claims</p>

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15 to 21 is considered to be novel and to involve an inventive step.

3. The unit of measurement (A°) used on page 12 of the description is not expressed in terms of the units stipulated by PCT Rule 10.1(a).

3.1 Contrary to the requirements of PCT Rule 5.1(a)(ii), the description does not indicate the relevant prior art disclosed in documents D1 and D2, nor does it cite said documents.